

WHAT IS CLAIMED IS:

1. A warning generating apparatus for generating a warning in a navigation system, the apparatus comprising:
 - 5 a data receiving unit for receiving route guidance information data and outputting the route guidance information data ;
 - a data analyzing unit for determining whether warning data has been included in the route guidance information data outputted from the data receiving unit or not;
 - a sensor for sensing a current travel speed of a movable body;
 - 10 a restricted warning generating unit for receiving the route guidance information data from the data analyzing unit if the route guidance information data includes the warning data, for receiving the current travel speed from the sensor, and for determining whether the restricted warning generating unit will output a warning for the warning data based on warning generation conditions stored in advance according to a
 - 15 kind of the warning data; and
 - a warning/guidance output unit for outputting the warning corresponding to the warning data that is included in road guidance information data, when the restricted warning generating unit determines to output the warning. unit
- 20 2. The warning generating apparatus as claimed in claim 1, wherein the data receiving section receives route guidance information data which further includes current weather information.
3. The warning generating apparatus as claimed in claim 1,
- 25 wherein the data receiving unit receives route guidance information data which further includes current time information.
4. The warning generating apparatus as claimed in claim 1,
- wherein the data receiving unit receives the route guidance information data
- 30 which further includes a regulation speed and road information representing danger information.

5. The warning generating apparatus as claimed in claim 1,
 wherein the sensor further includes a speed sensor which is installed on a predetermined position of the movable body and which senses the travel speed of the movable body.

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6. The warning generating apparatus as claimed in claim 1,
 wherein the sensor receives the travel speed of the movable body from a speed sensor which is installed on a predetermined position of the movable body and which senses the travel speed of the movable body.

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7. The warning generating apparatus as claimed in claim 1,
 wherein the restricted warning generating unit further
 receives route guidance information data having current time/weather information from the data receiving unit and receives the current travel speed of the
 15 movable body from the sensor,

determines actual travel environment information of the movable body,
 checks the kind of the warning data transmitted from the data analyzing unit,
 compares warning generation conditions corresponding to the checked kind of the warning data with the actual travel environment information,
 20 determines to output a warning only when the actual travel environment information satisfies the warning generation conditions corresponding to the warning data, and

outputs the warning information to the warning/guidance output unit if it is determined to output a warning.

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8. The warning generating apparatus as claimed in claim 1,
 wherein when the route guidance information data does not include warning data when the route guidance information data is transmitted from the data analyzing unit, the warning/guidance output unit general path guidance information based on the
 30 route guidance information data .

9. A warning generating method for generating a warning of a navigation

system, the method comprising the steps of:

- receiving route guidance information data ;
- determining whether warning data has been included in the received route guidance information data ;
- 5 checking a kind of the warning data when the warning data has been included in the route guidance information data;
- determining if a warning corresponding to the warning data will be outputted, based on the checked kind of the warning data and based on warning generation conditions stored in advance according to the kind of the warning data; and
- 10 outputting the warning corresponding to the warning data when it is determined to output the warning.

10. The warning generating method as claimed in claim 9,
wherein the received route guidance information data includes current weather
15 information.

11. The warning generating method as claimed in claim 9,
wherein the received route guidance information data includes current time
information.

20 12. The warning generating method as claimed in claim 9,
wherein the received route guidance information data includes a regulation speed and road information.

25 13. The warning generating method as claimed in claim 9,
wherein the determining step further comprises the steps of
receiving current weather/time information and a current travel speed of a movable body and determining actual travel environment information of the movable body;

30 comparing warning generation conditions corresponding to the checked kind of the warning data with the actual travel environment information; and
determining to output a warning only when the actual travel environment

information satisfies the warning generation conditions corresponding to the checked kind of the warning data.

14. The warning generating method as claimed in claim 9, further comprising
5 the step:

outputting general path guidance information based on the route guidance information data when the warning data has been included in the received route guidance information data.

10 15. A navigation system comprising:
a warning generating apparatus for restrictively outputting a warning based on actual travel environment information of a movable body.

16. The navigation system as claimed in claim 15,
15 wherein the warning generating apparatus further comprises
a data receiving unit for receiving route guidance information data and current weather/time information, and for outputting the path data and the current weather/time information;

a data analyzing unit for determining whether warning data has been
20 included in the route guidance information data outputted from the data receiving unit or not;

a sensor for sensing a current travel speed of a movable body;

a restricted warning generating unit for receiving the route guidance
information data from the data analyzing unit if it is determined to include the
25 warning data, and for determining whether it will output a warning for the warning data or not based on warning generation conditions stored in advance according to a kind of the warning data; and

a warning/guidance output unit for outputting warning information
when the warning information has been transmitted if the restricted warning
30 generating unit has determined to output a warning.

17. The navigation system as claimed in claim 16,

wherein the data receiving unit receives route guidance information data which further includes current weather information.

18. The navigation system as claimed in claim 16,
5 wherein the data receiving unit receives route guidance information data further includes current time information.

19. The navigation system as claimed in claim 16,
wherein the data receiving unit receives route guidance information data
10 further includes a regulation speed and road information representing danger information.

20. The navigation system as claimed in claim 16,
wherein the sensor includes a speed sensor which is installed on a
15 predetermined position of the movable body and senses a travel speed of the movable body.

21. The navigation system as claimed in claim 16,
wherein the sensor receives the travel speed of the movable body from a speed
20 sensor which is installed on a predetermined position of the movable body and which senses the travel speed of the movable body.

22. The navigation system as claimed in claim 16,
wherein the restricted warning generating unit further
25 receives the current travel speed of the movable body from the sensor unit and determines actual travel environment information of the movable body,
checks a kind of warning data transmitted from the data analyzing unit,
compares warning generation conditions corresponding to the grasped kind with the actual travel environment information,
30 determines to output a warning only when the actual travel environment information satisfies the warning generation conditions corresponding to the warning data, and

outputs the warning information to the warning/guidance output unit if it is determined to output a warning.

23. The navigation system as claimed in claim 16,

- 5 wherein when the route guidance information data does not include warning data when the route guidance information data is transmitted from the data analyzing unit, the warning/guidance output unit outputs general path guidance information based on the route guidance information data .